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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) Process for the purification of radioisotopes wherein the isotopes are dissolved in a dilute acidic solution and adsorbed on the surface of a  $d^{+10}$ -~~metal~~ metal selected from the group consisting of platinum, palladium and nickel whereby the isotopes are selectively desorbed by elution with an eluent in the presence of hydrogen gas.
2. (Currently Amended) Process according to claim 1 wherein the surface of the  $d^{+10}$ -~~metal~~ metal is an activated surface.
3. (Currently Amended) Process according to claim 1 wherein the surface of the  $d^{+10}$ -~~metal~~ metal is not an activated surface.
4. (Currently Amended) Process for the concentration of radioisotopes wherein the isotopes are dissolved in a dilute acidic solution and adsorbed on the surface of a  $d^{+10}$ -~~metal~~ metal selected from the group consisting of platinum, palladium and nickel whereby the isotopes are selectively desorbed by elution with an eluent in the presence of hydrogen gas.
5. (Currently Amended) Process according to claim 4 wherein the surface of the  $d^{+10}$ -~~metal~~ metal is an activated surface.
6. (Currently Amended) Process according to claim 4 wherein the surface of the  $d^{+10}$ -~~metal~~ metal is not an activated surface.
7. (Currently Amended) Process for the purification and concentration of radioisotopes wherein the isotopes are dissolved in a dilute acidic solution and adsorbed on the

surface of a  $d^{10}$ -~~metal~~ metal selected from the group consisting of platinum, palladium and nickel  
whereby the isotopes are selectively desorbed by elution with an eluent in the presence of  
hydrogen gas.

8. (Currently Amended) Process according to claim 7 wherein the surface of the  
 $d^{10}$ -~~metal~~ metal is an activated surface.

9. (Currently Amended) Process according to claim 7 wherein the surface of the  
 $d^{10}$ -~~metal~~ metal is not an activated surface.

10. (Currently Amended) Process according to claims 1-9, wherein the  $d^{10}$ -~~metal~~  
metal is platinum.

11. (Original) Process according to claim 1, 4, or 7, wherein the particle size of the  
metal ranges from 1 $\mu$ m to 1.5mm, more preferably from 5 $\mu$ m to 1mm.

12. (Original) Process according to claim 2, 5, or 8, wherein the surface of the metal  
is activated by hydrogen.

13. (Original) Process according to claim 1, 4, or 7, wherein the acidic solution is a  
sulphuric acid solution.

14. (Original) Process according to claim 1, 4, or 7, wherein the eluent is an alkaline  
solution with a concentration of OH<sup>-</sup> from 10<sup>-4</sup> to 1M, preferably 10<sup>-3</sup> -0.75, more preferably  
5\*10<sup>-2</sup> -0.5.

15. (Currently Amended) Process according to claim 1, 4 or 7, wherein the process is  
carried out employing a column and wherein the column is eluted by an alternating flux of the an  
alkaline solution and hydrogen gas.

16. (Original) Process according to claim 1, 4, or 7, wherein the eluent comprises a solution of formiate.

17. (Currently Amended) Process according to claim 1, 4, or 7, wherein the process is carried out employing a column and wherein the column is eluted by a solution comprising formiate, preferably at elevated temperatures.

18. (Original) Process according to claim 1, 4, or 7, wherein the isotope is selected from I- and At-isotopes.

19. (Original) Process according to claim 1, 4, or 7, wherein the isotope is selected from  $^{123}\text{I}$  and  $^{131}\text{I}$ .

20. (Withdrawn) Process for the purification of solutions of iodine isotopes by the reduction of oxidised iodine containing compounds on a platinum, palladium or nickel metal, preferably platinum.

21. (Withdrawn) Process according to claim 20 wherein the metal is activated.

22. (Withdrawn) Process according to claim 20 wherein the metal is not activated

23. (Withdrawn) Process according to claim 20 wherein the solution contains oxidised iodine compounds such as iodate and periodate.

24. (Withdrawn) Process according to claim 20 wherein the metal has *in situ* reducing properties.

25. (Currently Amended) Process for preparing a transportable form of isotopes a radioiodine isotope whereby the isotope is absorbed on a ~~d<sup>10</sup>-metal~~ metal selected from the group consisting of platinum, palladium and nickel.

26. (Currently Amended) Process for the purification and concentration of radioiodine isotopes comprising the steps of:

- a. providing a platinum surface in a column;
- b. loading the column with an acidic radioiodine solution, and;
- c. eluting the column,

providing that prior to step a there is a step of activating the platinum surface with hydrogen gas.

27. (Cancelled)

28. (Withdrawn) Apparatus for the purification of radioisotopes comprising a column containing a metal, means for activating the metal, means for loading the column and means for eluting the column.

29. (Withdrawn) Column comprising platinum and radioiodine, wherein the iodine is absorbed on the platinum.

30. (Withdrawn) Composition comprising platinum and iodine in a vessel suitable for storage and shipment.